In critical path of the project keeps changing.

In the chapter No. 22, the concept of Criticalchain is introduced when a non-critical path’s activity leads to delays thatthe critical path of the project keeps changing. It explains the importance ofsequencing activities in a project not only based on tasks but also on theavailability of the resources. The resources involved in certain specificactivities can lead to delays in the project and therefore it becomes veryimportance to take resource availability as an important factor while schedulingactivities in a project. Now the concept of bottleneck i.

e. when there isstrict resource employment or a particular task which leads to delays andshuffle of critical path. In order to explain the concept of critical chainthe author has portrayed the scenario of a classroom where the issue of shufflein the critical path occurred in one of the students project. Upon further investigationand question answer session between students and the lecturer the concept ofcritical chain was explained.

To understand the same let us that take anexample of any construction firm working up on an Infrastructure project. TheProject is constructing a world class sports complex. Now the construction of suchhuge level sports complex would require certain specific activities in certainpaths of the network diagram. Let us take waterproofing as one such activity. Thereis a specialized team for waterproofing activity. Let the water-proofingactivity be WP.

As seen from the network diagram that waterproofingactivity WP is present in all paths of the network diagram of the project. Thesequencing of tasks in a particular path as per hierarchy of work to be done isimportant but keeping

in mind the fact that we have only a single specializedteam available for waterproofing we must make sure that the activities are notparallel in the paths. If the activities are parallel any delay in WP will notonly affect the feeder buffer of the particular path but will also affect thepath having the activity WP in parallel. Which will result in change ofcritical path during the project. Therefore WP should be scheduled such that noWP is parallel in the network diagram and takes place simultaneously.

In this waynay delay in the activity WP will be absorbed by the feeder buffer of the particularpath and will not affect the overall project buffer. Hence delay of the overallproject can be avoided i. e.

W and should absorb only the feeder buffer and notthe project buffer. This is the optimization of schedules of the resource. Hence a critical chain of the activity Wshould be made in such a way that the activity W is done simultaneously in thepaths (critical or non-critical) and the sequence will not matter. Therefor forany construction organization it is important to schedule project based notonly on tasks but also on the resource availability in order to avoid delaysand jumps of critical path during certain stage of the project. This will notonly avoid the problem of shuffle of critical path during a project but willreduce the chances of any delay in the project due the activity WP.